

INVESTIGATING THE CHARACTERISTICS OF POLYNOMIAL FUNCTIONS

Function	Sketch	Degree of polynomial	Degree of poly: Even or Odd?	Leading Coefficient: Positive or Negative?	Number of Turning Points	End Behaviour as $x \rightarrow -\infty$	End Behaviour as $x \rightarrow \infty$
$f(x) = 9x^2 - 8x - 2$							
$f(x) = -x^4 - 3x^3 + 3x^2 + 8x + 5$							
$f(x) = 2x^6 - 13x^4 + 15x^2 + x - 17$							
$f(x) = -2x^4 - 4x^3 + 3x^2 + 6x + 9$							
$f(x) = x^3 - 5x^2 + 3x + 4$							
$f(x) = 2x^5 + 7x^4 - 3x^3 - 18x^2 - 20$							
$f(x) = -x^7 + 8x^5 - 16x^3 + 8x$							
$f(x) = -2x^3 + 8x^2 - 5x + 3$							

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Function	Sketch	Degree	Number of Zeroes
$f(x) = x^3 - 2x^2 - 4x + 8$			
$f(x) = x^3 + x^2 - 2x - 7$			
$f(x) = x^3 + 2x^2 - 3x - 5$			
$f(x) = x^4 + 2x^3 - x^2 - 2x$			
$f(x) = -x^4 + 2x^3 + x^2 + 2x$			
$f(x) = 2x^4 - 6x^3 + x^2 + 4x + 5$			
$f(x) = -x^4 - x^3 + 3x^2 + x - 2$			
$f(x) = x^4 + x^3 + x + 1$			